IN THE CLAIMS:

Please amend claims 1, 2, 8, 12 to 17, and 20 to 26 so that the claims read as follows:

1. (Currently amended) A method of isolating a defect in a scan chain comprising:

modifying a first test mode of one or more of a plurality of latches included in the scan chain;

operating the one or more latches whose first test modes are modified in the modified first test mode; and

operating one or more of the plurality of latches included in the scan chain in a second test mode wherein adjacent portions of a non-defective section of the scan chain store complementary signals.

2. (Currently amended) The method of claim 1 wherein ~~modifying the first test mode of one or more of the plurality of latches included in the scan chain includes modifying the first test mode of one or more of the plurality of latches included in the scan chain such that~~ the adjacent portions of a non-defective section of the scan chain store complementary signals when the one or more latches whose first test modes are modified are operated in the modified first test mode, wherein a portion includes at least one of one or more latches, one or more macros, and one or more partitions of a macro.

3. (Original) The method of claim 1 wherein operating the one or more latches whose first test modes are modified in the modified first test mode includes operating the one or more latches whose first test modes are modified in a modified flush test mode.

4. (Original) The method of claim 1 wherein operating one or more latches whose first test modes are modified in the modified first test mode includes initializing the value stored in the one or more latches whose first test modes are modified such that adjacent portions in a non-defective section of the scan chain store complementary signals, wherein a portion includes at least one of one or more latches, one or more macros, and one or more partitions of a macro.

5. (Original) The method of claim 1 wherein operating one or more of the plurality of latches included in the scan chain in the second test mode includes operating one or more of the plurality of latches included in the scan chain in a scan mode.

6. (Original) The method of claim 1 wherein operating one or more of the plurality of latches included in the scan chain in the second test mode includes unloading data from the scan chain.

7. (Original) A method of isolating a defect in a scan chain comprising:

modifying a first test mode of one or more of a plurality of latches included in the scan chain;

while inputting a first value to the scan chain, operating the one or more latches whose first test modes are modified in the modified first test mode to store a first set of data in the scan chain;

operating one or more of the plurality of latches included in the scan chain in a second test mode to output the first set of data;

while inputting a second value to the scan chain, operating the one or more latches whose first test modes are modified in the modified first test mode to store a second set of data in the scan chain;

operating one or more of the plurality of latches included in the scan chain in the second test mode to output the second set of data; and

employing the first set of data and the second set of data to isolate a defect in the scan chain.

8. (Currently amended) A method of testing and diagnosing a scan chain comprising:

altering the function of ~~the~~ a scan chain flush test mode of one or more of a plurality of latches included in the scan chain; and

employing the flush test mode to test and diagnose the scan chain.

9. (Original) The method of claim 8 further comprising employing a scan mode to test and diagnose the scan chain.

10. (Original) The method of claim 8 wherein altering the function of the scan chain flush test mode includes altering the function of the scan chain flush test mode such that an alternating set of complementing states are propagated through the scan chain.

11. (Original) The method of claim 8 wherein altering the function of the scan chain flush test mode includes altering the scan chain path input to one or more latches included in the

scan chain such that the one or more latches write the scan input when the flush test mode is employed.

12. (Currently amended) An integrated circuit (IC) for isolating a defect in a scan chain comprising:

a plurality of latches included in the scan chain; and

one or more logic devices coupled to the plurality of latches included in the scan chain;

wherein the IC is configured ~~adapted~~ to:

modify a first test mode of one or more of the plurality of latches included in the scan chain;

operate the one or more latches whose first test modes are modified in the modified first test mode; and

operate one or more of the plurality of latches included in the scan chain in a second test mode wherein adjacent portions of a non-defective section of the scan chain store complementary signals.

13. (Currently amended) The IC of claim 12 wherein the ~~IC is further adapted to modify the first test mode of one or more of the plurality of latches included in the scan chain such that~~ adjacent portions of a non-defective section of the scan chain store complementary signals when the one or more latches whose first test modes are modified are operated in the modified first test mode, wherein a portion includes at least one of one or more latches, one or more macros, and one or more partitions of a macro.

14. (Currently amended) The IC of claim 12 wherein the IC is further ~~adapted~~ configured to operate the one or more latches

whose first test modes are modified in a modified flush test mode.

15. (Currently amended) The IC of claim 12 wherein the IC is further ~~adapted~~ configured to initialize the value stored in the one or more latches whose first test modes are modified such that adjacent portions in a non-defective section of the scan chain store complementary signals, wherein a portion includes at least one of one or more latches, one or more macros, and one or more partitions of a macro.

16. (Currently amended) The IC of claim 12 wherein the IC is further ~~adapted~~ configured to operate one or more latches of the plurality of latches included in the scan chain in a scan mode.

17. (Currently amended) The IC of claim 12 wherein the IC is further ~~adapted~~ configured to unload data from the scan chain.

18. (Original) The IC of claim 12 wherein at least one of the one or more logic devices is coupled to a scan input of one or more of the plurality of latches included in the scan chain.

19. (Original) The IC of claim 18 wherein at least one of the plurality of latches includes an L1 latch coupled to an L2 latch; and

wherein at least one of the one or more logic devices is coupled to an output of one or more of the L1 latches.

20. (Currently amended) An integrated circuit (IC) for isolating a defect in a scan chain comprising:

a plurality of latches included in the scan chain; and

one or more logic devices coupled to the plurality of latches included in the scan chain;

wherein the IC is ~~adapted~~ configured to:

modify a first test mode of one or more of a plurality of latches included in the scan chain;

while inputting a first value to the scan chain, operate the one or more latches whose first test modes are modified in the modified first test mode to store a first set of data in the scan chain;

operate one or more of the plurality of latches included in the scan chain in a second test mode to output the first set of data;

while inputting a second value to the scan chain, operate the one or more latches whose first test modes are modified in the modified first test mode chain to store a second set of data in the scan chain;

operate one or more of the plurality of latches included in the scan chain in the second test mode to output the second set of data; and

employ the first set of data and the second set of data to isolate a defect in the scan chain.

21. (Currently amended) An integrated circuit (IC) for testing and diagnosing a scan chain comprising:

a plurality of latches catenated into the scan chain; and

one or more logic devices coupled to the scan chain;

wherein the IC is ~~adapted~~ configured to:

alter the function of the scan chain flush test mode; and

employ the flush test mode to test and diagnose the scan chain.

22. (Currently amended) The IC of claim 21 wherein the IC is further ~~adapted~~ configured to employ a scan mode to test and diagnose the scan chain.

23. (Currently amended) The IC of claim 21 wherein the IC is further ~~adapted~~ configured to alter the function of the scan chain flush test mode such that an alternating set of complementing states are propagated through the scan chain.

24. (Currently amended) The IC of claim 21 wherein the IC is further ~~adapted~~ configured to alter the function of the scan chain flush test mode using the one or more logic devices such that an alternating set of complementing states are propagated through the scan chain.

25. (Currently amended) The IC of claim 21 wherein the IC is further ~~adapted~~ configured to alter the scan chain path input to one or more latches such that the one or more latches write the scan input when the flush test mode is employed.

26. (Currently amended) The IC of claim 21 wherein the IC is further ~~adapted~~ configured to alter the scan chain path input to one or more latches using one or more logic devices such that the one or more latches write the scan input when the flush test mode is employed.

27. (Original) The method of claim 1 wherein the scan chain is a level sensitive scan design (LSSD) scan chain.

28. (Original) The method of claim 7 wherein the scan chain is a level sensitive scan design (LSSD) scan chain.

29. (Original) The method of claim 8 wherein the scan chain is a level sensitive scan design (LSSD) scan chain.

30. (Original) The IC of claim 12 wherein the scan chain is a level sensitive scan design (LSSD) scan chain.

31. (Original) The IC of claim 20 wherein the scan chain is a level sensitive scan design (LSSD) scan chain.

32. (Original) The IC of claim 21 wherein the scan chain is a level sensitive scan design (LSSD) scan chain.